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G. B. TRAPNELL

FUNNEL

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Fig.1.

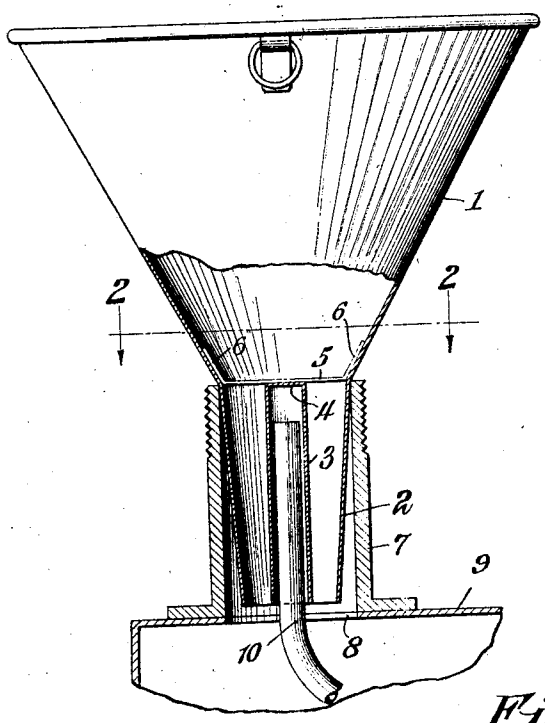


Fig.3.

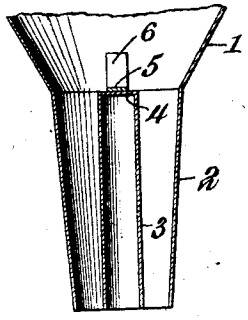
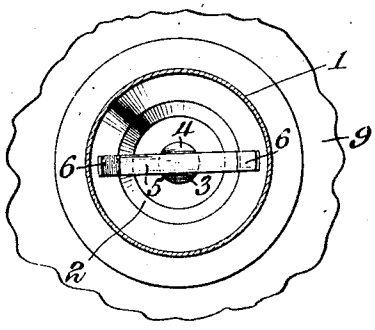


Fig.2.



Witnesses

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UNITED STATES PATENT OFFICE.

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FUNNEL.

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This invention relates to funnels, and more particularly to those used in filling the radiators of automobile or similar engines.

One of the objects is to provide a simple and cheaply manufactured device of strong and durable structure which may be easily introduced into the filling opening of such radiators and supported in position to direct the rapid flow of water thereinto without danger of spilling the same over the radiator, and without pouring any of the water down the usual overflow tube located in such filling openings, the device having simple means for engaging and covering the open upper end of said tube for the purpose.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawing forming a part of this specification, it being understood that while the drawing shows a practical form of the invention, the latter is not to be confined to strict conformity with the showing thereof, but may be changed or modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claim.

In the drawing, in which similar reference characters designate corresponding parts throughout the several figures:—

Figure 1 is a side elevation, partly in section, showing the improved funnel in operative position in the filling opening of an automobile radiator.

Figure 2 is a horizontal section taken on the line 2—2 of Figure 1.

Figure 3 is a detail, vertical section, taken at right angles to Figure 1.

The invention comprises a funnel of ordinary construction having the usual tapered body portion 1, to the lower, smaller end of which there is suitably connected the upper, larger end of a tapered spout 2. These two members may be separately formed and suitably soldered or otherwise connected together, or they may be formed of a single blank of suitable sheet metal, preferably copper, suitably rolled and formed into shape.

Mounted within the spout 2 and in concentric relation thereto, is an inner tube 3 formed of the same material as the parts 1 and 2, said tube being of equal length with the said spout and having its ends located flush with the respective ends of the spout.

The lower or outer end of the inner tube which is adjacent to the small end of the spout, is open, while the opposite end of the inner tube, which is adjacent to the reduced, lower end of the body of the funnel, is closed, as at 4, said closure being in the form of a disc or the like suitably secured to the end of the tube.

A cross bar 5, formed of the same material is centrally secured, in any desired manner, to the disc or closure 4 of the inner tube, and said bar extends entirely across the upper end of the spout and has its terminals 6 bent upwardly to conform to the tapered sides of the body portion 1 of the funnel, to which the same are secured, as by soldering or otherwise.

The entire device, as thus constructed, may be cheaply manufactured and sold at a low cost, and all of the functioning parts being located within the interior of the funnel, there are no parts to be lost, broken or impaired by rough usage around garages or similar places.

In using the device the spout 2 is placed within the collar 7 surrounding the filling opening 8 which is located on the top of all automobile or other radiators, as indicated at 9, and the dimensions of the spout are such as to permit the same to snugly fit within different sized collars 7 and to rest upon the top thereof, by reason of the taper of said spout, the drawing showing the funnel being supported upon a collar of maximum size, the upper edge of the latter contacting with the sides of the body of the funnel. Smaller collars will engage with the outer face of the tapered spout at different points and form a relatively tight joint around the outside of the spout to prevent the escape of water when the radiator is completely filled.

The diameter of the inner tube 3 is such as to freely admit of the entrance of the open, upper end of the usual over-flow tube 10 which is found in all radiators, said overflow tube passing through the open lower end of the inner tube 3 to be completely housed thereby, and as the funnel is lowered to rest upon the collar 7, the end of the over-flow tube is located a greater or lesser distance from the closure plate or disc 4.

The width of the supporting bar 5 is somewhat less than the diameter of the up-

per or closed end of the tube 3, and thus offers a minimum resistance or impediment to the passage of the water, as the same is poured into the open, upper and wider end of the body of the funnel and, as there is a complete, annular channel extending entirely around the inner tube 3, the full amount of the water may freely find entrance into the radiator, as fast as it may be poured into the funnel, for the main body of the water follows the interior walls of the funnel spout.

By reason of the complete encasement of the upper end of the over-flow tube by the inner tube 3 and the closure 4, no water may enter the same to be spilled over the floor of the garage or other place, and when the radiator is completely filled the water will not leak out materially between the collar 7 and the spout 2, but will rise within the body of the funnel and give due notice, whereupon the pouring is stopped and the funnel gradually lifted when the excess water, in a very small quantity, will flow out of the tube 10 to the level of the upper end of the over-flow tube.

Many automobiles are built with the overflow tubes normally located in the center of the filling openings, as illustrated in the drawing, and in such it is practically impossible to direct the flow of water in a manner to avoid pouring great quantities down said over-flow tube, when an ordinary funnel or no funnel at all is used. The improved funnel of the present invention may be easily and quickly applied in position to function on cars of this type, while in other cars the overflow tubes are normally located at or near one side of the collar 7 for the very purpose of allowing as little water as possible to enter the same upon filling, and in this latter class it is a comparatively easy matter to move the tube to the center of the filling opening in order to apply the inner tube 3 of the improved funnel thereto and permit the funnel to be lowered into resting position upon the upper, open end of the collar 7.

From the foregoing it will be seen that simple means have been incorporated in an ordinary funnel, to render the latter excellently adapted for use in filling the radiators of automobiles or in other similar engines or motors, the water being held from spilling over the hoods or radiators thereof and from flowing through the overflow tubes of the same.

What is claimed is:—

A funnel for filling automobile radiators comprising a tapered body portion and a tapered spout joined together, a longitudinally disposed inner tube mounted within the spout and having its ends flush with the respective ends of the spout, the outer or lower end of the said tube being open to receive the free end of an overflow tube and the inner or upper end of the same being closed to prevent water from entering said overflow tube, and a cross bar terminally attached to the opposite sides of said body portion and centrally connected to the closed end of the inner tube to support the same.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

GEORGE B. TRAPNELL.